

REMARKS

In the Office Action of September 17, 2004, the Examiner objected to claims 69, 71 and 72. Applicant amended these claims to overcome the objections. Applicant also agrees with the amendments to the specification proposed by the Examiner.

Applicant amended claim 62 to include a focusing mechanism, which is described in the pending specification and discussed in detail in the section "Adjustment of Focus" starting on page 28 of the specification. Applicant also included new claims 91 – 96 fully supported by the pending specification.

The Examiner rejected claims 62-63 and 68-69 over US Patent 5,241,364 to Kimura. Applicant respectfully disagrees with these rejections if again applied to these claims.

Independent claim 62 (and independent claim 72) is directed to a scanner for delivering excitation light and detecting excited fluorescent light. The present scanner includes a scanning assembly for displacing an objective lens in a scanning motion, while the optical path provided by the displaced objective lens and the scanning assembly has a substantially constant length (i.e., the optical pathlength from the source and to the detector doesn't vary substantially). Furthermore, the scanner claimed in claim 62 includes a focusing mechanism constructed to focus the objective lens with respect to the surface being scanned. Kimura does not disclose such scanner.

Kimura discloses a confocal scanning type of a phase contrast microscope that includes a sample supporting member, which supports a sample, and a light source, which produces a light beam. A light projecting optical device forms a light spot of the light beam on the sample. A light receiving optical device forms a point image of the light beam radiated out of the sample. A photodetector detects the point image. A phase difference optical device has a stop located on the side of the light projecting optical device and a phase plate which is located on the side of the light receiving optical device. The phase difference optical device imparts a phase lag to only either one of a light component, which has been diffracted by the sample, and an undiffracted light component, which has passed through the sample or has been reflected thereby,

and causes the light components to interfere with each other. A movable member supports the light projecting optical device, the light receiving optical device, and the phase difference optical device. The movable member is moved such that the light spot scans the sample in main scanning directions. The sample supporting member is moved with respect to the movable member in sub-scanning directions, which are normal to the main scanning directions, and at a speed lower than the main scanning speed, as stated by Kimura.

The scanner of Kimura is designed differently, and for a different purpose, than the claimed invention. While Kimura mentions fluorescence, it is in different context and the only embodiment even remotely similar to the claimed invention is the embodiment of Fig. 5 (i.e., reflective geometry). Kimura does not disclose a scanning assembly arranged to provide an optical path from a light source to the examined surface and from the examined surface fluorescent light, excited in response to the excitation beam, to a light detector; wherein the displaced objective lens and the scanning assembly providing the optical path having substantially constant length, and a focusing mechanism constructed to focus the objective lens with respect to the examined surface.

The above-discussed differences are even mentioned by the Examiner when citing Kimura in the Office Action: "Kimura discloses a confocal microscope for examining object which is able to include a sample of living organism or sample having fluorescent agent (see columns 1 and 2) ... The scanning assembly (115) comprises a scan arm supporting an objective lens (117) wherein the light path from the end of the fiber (114) to the surface of the object (123) is kept constant when the scanning assembly (115) is oscillated by the driving mechanism (133) along a main scanning direction which direction is parallel to the plane of the object surface. The microscope also comprises another support (151) supporting the object and a driving mechanism for moving the object in a sub-scanning direction..." (Emphasis ours)

The Examiner rejected claims 62 and 65 under 35 U.S.C. 103(a) as obvious over U.S. Patent 5,578,818 to Kain et al. in view of U.S. Patent No. 4,948,330 to Nomura et

al. Applicant respectfully disagrees with these rejections if again applied to these claims.

It is true that Kain "discloses a scanning system for scanning a sample and for guiding fluorescent light from the sample to a detecting system," as stated by the Examiner. However, Kain does not disclose the scanner, claimed in claim 62, which includes a focusing mechanism constructed to focus said objective lens with respect to the surface being scanned (as acknowledged by the Examiner).

In U.S. Patent No. 4,948,330, Nomura discloses an alignment stage device for a **reticle mask**, having first and second stages supported on a base and movable in those directions which are perpendicular to each other on a horizontal plane, and a third stage provided with stands on which a workpiece is mounted, and movable relative to each of the stages. When the first stage is moved, the second and third stages are moved together with the first stage and when the second stage is moved, the third stage is moved together with the second stage and wherein the first and second stages are square frames each having center opening and the second stage is arranged in the center opening of the first stage while the third stage is arranged in the center opening of the second stage. There is no suggestion to combine the device of Nomura for aligning a **reticle mask** with the scanner of Kain.

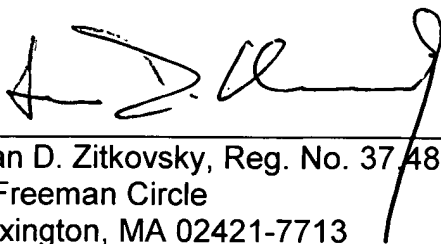
Importantly, the device of Nomura in combination with the scanner of Kain does not result in the claimed scanner including the claimed scanning assembly and a focusing mechanism constructed to focus the objective lens with respect to the surface being scanned. Therefore, claims 62 and 65 are patentable over Kain in combination with Nomura.

The Examiner made an obviousness double-patenting rejection with respect to US Patent 6,201,639, but this obviousness double-patenting rejection is now moot in view of the restriction requirement made final in the Office Action of September 17, 2004.

Accordingly, all pending claims 62 – 81 and 91 - 97 are in condition for allowance and such action is respectfully requested.

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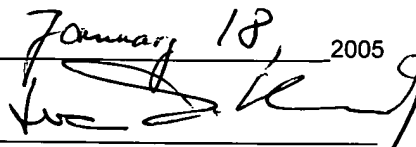
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